09/518763

Search results for Paper #4

WEST

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Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences

Your wildcard search against 2000 terms has yielded the results below

Search for additional matches among the next 2000 terms

starting with: CELL$(CELLOSOLVE-1.0).P27-P83,P22-P26,P19-P21,P1-P17,P18-P18.

Search Results -

Terms	Documents
l6 and stab$ adj5 cell$	6

Database: US Patents Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Refine Search: `l6 and stab$ adj5 cell$` Clear

Search History

Today's Date: 8/22/2000

DB Name	Query	Hit Count	Set Name
USPT,JPAB,EPAB,DWPI,TDBD	l6 and stab$ adj5 cell$	6	L8
USPT,JPAB,EPAB,DWPI,TDBD	l6 and stab$ adj5 cell$ adj5 line$	0	L7
USPT,JPAB,EPAB,DWPI,TDBD	apoptosis adj5 inhibit$	530	L6
USPT,JPAB,EPAB,DWPI,TDBD	l2 and stab$ adj5 transf$	0	L5
USPT,JPAB,EPAB,DWPI,TDBD	l2 and stab$ adj5 cell	1	L4
USPT,JPAB,EPAB,DWPI,TDBD	l2 and stab$ adj5 cell adj5 line$	0	L3
USPT,JPAB,EPAB,DWPI,TDBD	apoptosis adj5 suppress$	103	L2
USPT,JPAB,EPAB,DWPI,TDBD	apoptosis	3504	L1

WEST

Your wildcard search against 2000 terms has yielded the results below

Search for additional matches among the next 2000 terms

Generate Collection

Search Results - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 6093795 A

L8: Entry 1 of 6 File: USPT Jul 25, 2000

US-PAT-NO: 6093795
DOCUMENT-IDENTIFIER: US 6093795 A
TITLE: Isolated human Prt1 protein

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 2. Document ID: US 6015710 A

L8: Entry 2 of 6 File: USPT Jan 18, 2000

US-PAT-NO: 6015710
DOCUMENT-IDENTIFIER: US 6015710 A
TITLE: Modulation of mammalian telomerase by peptide nucleic acids

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 3. Document ID: US 6010878 A

L8: Entry 3 of 6 File: USPT Jan 4, 2000

US-PAT-NO: 6010878
DOCUMENT-IDENTIFIER: US 6010878 A
TITLE: Interleukin-1 .beta. converting enzyme like apoptotic protease-6

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 4. Document ID: US 6008042 A

L8: Entry 4 of 6 File: USPT Dec 28, 1999

US-PAT-NO: 6008042
DOCUMENT-IDENTIFIER: US 6008042 A
TITLE: Interleukin-1 beta converting enzyme like apoptotic protease-7

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 5. Document ID: US 6004579 A

L8: Entry 5 of 6 File: USPT Dec 21, 1999

US-PAT-NO: 6004579
DOCUMENT-IDENTIFIER: US 6004579 A
TITLE: Compositions which inhibit apoptosis, methods of making the compositions and uses thereof

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Image

☐ 6. Document ID: AU 9889160 A, WO 9910509 A1

L8: Entry 6 of 6 File: DWPI Mar 16, 1999

DERWENT-ACC-NO: 1999-190624
DERWENT-WEEK: 199930
COPYRIGHT 2000 DERWENT INFORMATION LTD

TITLE: Method for enhancing transcript RNA stability in cells - by contacting cells with a polynucleotide which inhibits transcript RNA degradation

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw Desc | Clip Img | Image

Generate Collection

Terms	Documents
l6 and stab$ adj5 cell$	6

Display 100 Documents, starting with Document: 6

Display Format: TI Change Format

ILIGHT set on as ''
HILIGHT set on as ''
? begin 5,6,55,154,155,156,312,399,biotech,biosci

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      Set  Items  Description
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? s apoptosis and stabl? and cell?

Processing
Processing
Processing
Processed  10 of  36 files ...
Processing
Processed  20 of  36 files ...
Processing
Completed processing all files
         332468  APOPTOSIS
        1274359  STABL?
       14560731  CELL?
      S1    7622  APOPTOSIS AND STABL? AND CELL?
?
PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES
? s s1 and stably transf?

           7622  S1
             85  STABLY TRANSF?
      S2      0  S1 AND STABLY TRANSF?
? s s1 and stably and transf?

Processing
Processed  10 of  36 files ...
Processing
Completed processing all files
           7622  S1
          82637  STABLY
        5584734  TRANSF?
      S3    2376  S1 AND STABLY AND TRANSF?
? s s3 and p35

           2376  S3
           6089  P35
      S4      65  S3 AND P35
? rd s4

...examined 50 records  (50)
...completed examining records
      S5      20  RD S4 (unique items)
? d s5/3/1-20

      Display 5/3/1     (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2000 BIOSIS. All rts. reserv.

12376373   BIOSIS NO.: 200000129875
Part I. Bcl-2 and bcl-xL limit apoptosis upon infection with
  alphavirus vectors.
AUTHOR: Mastrangelo Alison J; Hardwick J Marie; Bex Francoise; Betenbaugh
  Michael J(a)
AUTHOR ADDRESS: (a)Department of Chemical Engineering, The Johns Hopkins
  University, 3400 North Charles Street, Baltimore, MD, 21218**USA
2000
JOURNAL: Biotechnology and Bioengineering.  67 (5):p544-554 March 5, 2000
ISSN: 0006-3592
```

DOCUMENT TYPE: Articl
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

- end of record -

?

Display 5/3/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11840045 BIOSIS NO.: 199900086154
Baculovirus p33' binds human p53 and enhances p53-mediated **apoptosis**.
AUTHOR: Prikhod'ko Grigori G; Wang Yan; Freulich Ella; Prives Carol; Miller Lois K(a)
AUTHOR ADDRESS: (a)Dep. Entomol., 413 Biol. Sci., Univ. Georgia, Athens, GA 30602**USA
1999
JOURNAL: Journal of Virology 73 (2):p1227-1234 Feb., 1999
ISSN: 0022-538X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

- end of record -

?

Display 5/3/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11674779 BIOSIS NO.: 199800456510
Apoptosis resulting from superinfection of Heliothis zea virus 1 is inhibited by **p35** and is not required for virus interference.
AUTHOR: Lee Jin-Ching; Chao Yu-Chan(a)
AUTHOR ADDRESS: (a)Inst. Molecular Biol., Academia Sinica, Nankang, Taipei 115**Taiwan
1998
JOURNAL: Journal of General Virology 79 (9):p2293-2300 Sept., 1998
ISSN: 0022-1317
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

- end of record -

? d s5/9/3

Display 5/9/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11674779 BIOSIS NO.: 199800456510
Apoptosis resulting from superinfection of Heliothis zea virus 1 is inhibited by **p35** and is not required for virus interference.
AUTHOR: Lee Jin-Ching; Chao Yu-Chan(a)
AUTHOR ADDRESS: (a)Inst. Molecular Biol., Academia Sinica, Nankang, Taipei 115**Taiwan
1998
JOURNAL: Journal of General Virology 79 (9):p2293-2300 Sept., 1998
ISSN: 0022-1317
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Superinfection of Spodoptera frugiperda insect **cells** that

are persistently infected with Heliothis zea 1 (Hz-1) virus induces general **cellular apoptosis** and subsequently results

-more-

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Display 5/9/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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homologous virus interference. Since **apoptosis** correlates closely with both a significant decrease in yield of virus progeny and expansion of virus infection among **cells**, further experiments were designed to verify the direct association of **apoptosis** with homologous. interference. It was found that superinfection-induced **apoptosis** can be efficiently blocked by the **stable transfection** of **p35** into **cells** before or after the establishment of persistent virus infection. However, persistently infected **cells** are still strongly resistant to the challenge of Hz-1 virus, indicating that the induction of **apoptosis** is not essential for the resulting homologous Hz-1 virus interference. Replication and transcription of viral genomes are greatly retarded upon Hz-1 virus superinfection of persistently infected **cells**, whether **stably transfected** with **p35** or not, suggesting that upon superinfection, the decreasing yield of virus progeny in these persistently infected **cells** is caused by a blockage early after virus infection.

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Display 5/9/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2000 BIOSIS. All rts. reserv.
DESCRIPTORS:
MAJOR CONCEPTS: Infection; Physiology; Virology
BIOSYSTEMATIC NAMES: Lepidoptera--Insecta, Arthropoda, Invertebrata, Animalia; Viruses--Microorganisms
ORGANISMS: Heliothis-zea virus 1 (Viruses)--pathogen; Spodoptera-frugiperda (Lepidoptera)--host, insect **cells**, superinfection
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): Animals; Arthropods; Insects; Invertebrates; Microorganisms; Viruses
DISEASES: viral infection--viral disease
CHEMICALS & BIOCHEMICALS: **p35--transfection**
MISCELLANEOUS TERMS: **apoptosis**--superinfection-induced; homologous virus interference; viral challenge; viral genome--replication, transcription
CONCEPT CODES:
33502 Virology-General; Methods
12002 Physiology, General and Miscellaneous-General

-more-

? d s5/3/4-20

Display 5/3/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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11472344 BIOSIS NO.: 199800253676
The baculovirus anti-apoptotic **p35** protein promotes **transformation** of mouse embryo fibroblasts.
AUTHOR: Resnicoff Mariana(a); Valentinis Barbara; Herbert Debroski; Abraham David; Friesen Paul D; Alnemri Emad S; Baserga Renato
AUTHOR ADDRESS: (a)Kimmel Cancer Inst., Bluemle Life Sci. Build., Room 606, 233 S. Tenth St., Philadelphia, PA 1910**USA
1998
JOURNAL: Journal of Biological Chemistry 273 (17):p10376-10380 April 24,

1998
ISSN: 0021-9258
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

- end of record -

? d s5/9/4

Display 5/9/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11472344 BIOSIS NO.: 199800253676
The baculovirus anti-apoptotic **p35** protein promotes **transformation** of mouse embryo fibroblasts.
AUTHOR: Resnicoff Mariana(a); Valentinis Barbara; Herbert Debroski; Abraham David; Friesen Paul D; Alnemri Emad S; Baserga Renato
AUTHOR ADDRESS: (a)Kimmel Cancer Inst., Bluemle Life Sci. Build., Room 606, 233 S. Tenth St., Philadelphia, PA 1910**USA
1998
JOURNAL: Journal of Biological Chemistry 273 (17):p10376-10380 April 24, 1998
ISSN: 0021-9258
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The baculovirus **p35** protein is a potent inhibitor of

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Display 5/9/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

programmed **cell** death induced by a variety of stimuli in insects, nematodes, and mammalian **cell** lines. The broad ability of **p35** in preventing **apoptosis** has led us to investigate its effect on mouse embryo fibroblasts in vitro and in vivo. For this purpose, we have used R- **cells** (3T3-like fibroblasts derived from mouse embryos with a targeted disruption of the insulin-like growth factor I receptor (IGF-IR) genes) and R508 **cells** (derived from R- and with 15 X 103 IGF-IRs per **cell**). Both **cell** lines grow normally in monolayer, but they do not form colonies in soft agar, and they are non-tumorigenic in nude mice. We show here that, in addition to its anti-apoptotic effect, **p35** causes **transformation** of R508 **cells**, as evidenced by the following: 1) decreased growth factor requirements, 2) ability to form foci in monolayer and colonies in soft agar, and 3) ability to form tumors in nude mice. Since R- **cells** **stably transfected** with **p35** do not **transform**, our observations suggest that in addition to its effect as an inhibitor of **apoptosis**, the baculovirus **p35** protein has **transforming**

-more-

? d s5/9/5-20

Display 5/9/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10943884 BIOSIS NO.: 199799565029
Baculovirus inhibitor of **apoptosis** functions at or upstream of the apoptotic suppressor **P35** to prevent programmed **cell** death.
AUTHOR: Manji Gulam A; Hozak Rebecca R; Lacount Douglas J; Friesen Paul D (a)

AUTHOR ADDRESS: (a)In[redacted] Molecular Virol., Bock Lab., U[redacted]iv. Wisconsin-Madison, [redacted]5 Linden Dr., Madison, WI 5370[redacted]**USA
1997
JOURNAL: Journal of Virology 71 (6):p4509-4516 1997
ISSN: 0022-538X
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Members of the inhibitor of **apoptosis** (iap) gene family prevent programmed **cell** death induced by multiple signals in diverse organisms, suggesting that they act at a conserved step in the

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Display 5/9/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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apoptotic pathway. To investigate the molecular mechanism of iap function, we expressed epitope-tagged Op-iap, the prototype viral iap from Orgyia pseudotsugata nuclear polyhedrosis virus, by using novel baculovirus recombinants and **stably transfected** insect **cell** lines. Epitope-tagged Op-iap blocked both virus- and UV radiation-induced **apoptosis**. With or without apoptotic stimuli, Op-IAP protein (31 kDa) cofractionated with **cellular** membranes and the cytosol, suggesting a cytoplasmic site of action. To identify the step(s) at which Op-iap blocks **apoptosis**, we monitored the effect of Op-iap expression on in vivo activation of the insect CED-3/ICE death proteases (caspases). Op-iap prevented in vivo caspase-mediated cleavage of the baculovirus substrate inhibitor **P35** and blocked caspase activity upon viral infection or UV irradiation. However, unlike the stoichiometric inhibitor **P35**, Op-IAP failed to affect activated caspase as determined by in vitro protease assays. These findings provide the first biochemical evidence that Op-iap blocks activation of the host caspase or inhibits its activity by a mechanism distinct from **P35**.

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Moreover, as suggested by the capacity of Op-iap to block **apoptosis** induced by diverse signals, including virus infection and UV radiation, iap functions at a central point at or upstream from steps involving the death proteases.

DESCRIPTORS:
MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; **Cell** Biology ; Genetics; Infection; Microbiology; Pathology; Radiation Biology
BIOSYSTEMATIC NAMES: Baculoviridae--Viruses; Lepidoptera--Insecta, Arthropoda, Invertebrata, Animalia
ORGANISMS: baculovirus (Baculoviridae); Lepidoptera (Lepidoptera); Orgyia pseudotsugata nuclear polyhedrosis virus (Baculoviridae)
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; arthropods; insects; invertebrates; microorganisms; viruses
MISCELLANEOUS TERMS: Research Article; APOPTOTIC SUPPRESSOR; IAP GENES; INHIBITOR OF **APOPTOSIS** GENES; IPL-SF21 **CELL** LINE; MOLECULAR GENETICS; PREVENTION; PROGRAMMED **CELL** DEATH; **P35**; UV

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DIALOG(R)File 5:Biosis Previews(R)
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RADIATION; VIRAL DISEASE; VIRUS INFECTION
CONCEPT CODES:
02506 Cytology and Cytochemistry-Animal
06506 Radiation-Radiation Effects and Protective Measures
10062 Biochemical Studies-Nucleic Acids, Purines and Pyrimidines
10064 Biochemical Studies-Proteins, Peptides and Amino Acids
12510 Pathology, General and Miscellaneous-Necrosis (1971-)
31500 Genetics of Bacteria and Viruses
33506 Virology-Animal Host Viruses
36006 Medical and Clinical Microbiology-Virology
32600 In Vitro Studies, Cellular and Subcellular
BIOSYSTEMATIC CODES:
02603 Baculoviridae (1993-)
75330 Lepidoptera

- end of record -

?

Display 5/9/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

09603198 BIOSIS NO.: 199598058116
Suppression of **apoptosis** in insect **cells stably transfected** with baculovirus **p35**: Dominant interference by N-terminal sequences **p35**-1-76.
AUTHOR: Cartier Jennifer L; Hershberger Pamela A; Friesen Paul D
AUTHOR ADDRESS: Inst. Mol. Virol., Bock Lab., Univ. Wis.-Madison, 1525 Linden Dr., Madison, WI 53706-1596**USA
1994
JOURNAL: Journal of Virology 68 (12):p7728-7737 1994
ISSN: 0022-538X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Expression of **p35** from the DNA genome of Autographa californica nuclear polyhedrosis virus (AcMNPV) suppresses virus-induced

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Display 5/9/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

apoptosis and promotes virus replication in Spodoptera frugiperda (SF21) **cells**. To examine the molecular mechanism by which **p35** prevents **apoptosis** in insects, SF21 **cells** were **stably transfected** with **p35**. Neomycin-resistant **cell** lines that synthesized protein **P35** were identified. **Stable transfection** with **p35** protected SF21 **cells** from **apoptosis** induced by actinomycin D concentrations that caused apoptotic death of untransfected **cells**. **Cellular** expression of **p35** also blocked **apoptosis** induced by infection with **p35** null mutants and restored mutant replication to levels comparable to those of wild-type virus. In contrast, **stable** expression of the mammalian death suppressor bcl-2 failed to block actinomycin D- or AcMNPV-induced **apoptosis**. Thus, **p35** was sufficient to prevent **apoptosis**, whereas bcl-2 was not, suggesting that the activities of the two nonhomologous death regulators are functionally distinct. **Stable** expression of the truncation mutant **p35**-1-76 containing the N terminus of **p35**, failed to block

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Display 5/9/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

apoptosis. However, **p35**-1-76 interfered with **p35** antiapoptotic activity, since **stably transfected cells** underwent **apoptosis** upon infection with wild-type AcMNPV. Despite normal levels of viral **p35** transcription, **P35** levels were selectively reduced during infection. Thus, **p35**-1-76 acted as a dominant inhibitor by directly or indirectly affecting the synthesis or stability of viral **P35**. These results suggested that the N terminus of **P35** constitutes a functional domain which is required to interact with other proteins, possibly host invertebrate death regulators or **P35** itself.

DESCRIPTORS:
MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; **Cell** Biology ; Microbiology; Pathology; Physiology
BIOSYSTEMATIC NAMES: Baculoviridae--Viruses; Lepidoptera--Insecta, Arthropoda, Invertebrata, Animalia
ORGANISMS: Autographa californica nuclear polyhedrosis virus

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Display 5/9/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

(Baculoviridae); Spodoptera frugiperda (Lepidoptera)
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; arthropods; insects; invertebrates; microorganisms; viruses
CONCEPT CODES:
02506 Cytology and Cytochemistry-Animal
10064 Biochemical Studies-Proteins, Peptides and Amino Acids
10506 Biophysics-Molecular Properties and Macromolecules
12510 Pathology, General and Miscellaneous-Necrosis (1971-)
33506 Virology-Animal Host Viruses
64076 Invertebrata, Comparative and Experimental Morphology, Physiology and Pathology-Insecta-Physiology
03506 Genetics and Cytogenetics-Animal
31500 Genetics of Bacteria and Viruses
BIOSYSTEMATIC CODES:
02603 Baculoviridae (1993-)
75330 Lepidoptera

- end of record -

?

Display 5/9/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

09040561 BIOSIS NO.: 199497048931
Expression of the baculovirus **p35** gene inhibits mammalian neural **cell** death.
AUTHOR: Rabizadeh S; Lacount D J; Friesen P D; Bredesen D E(a)
AUTHOR ADDRESS: (a)Dep. Neurology, UCLA Sch. Med., 710 Westwood Plaza, Los Angeles, CA 90024-1769**USA
1993
JOURNAL: Journal of Neurochemistry 61 (6):p2318-2321 1993
ISSN: 0022-3042
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Expression of the **apoptosis** suppressor gene **p35**, derived from the baculovirus Autographa californica nuclear polyhedrosis

virus, markedly inhibited the **cell** death of **stably**

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Display 5/9/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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transfected mammalian neural **cells** whether the **cell** death was induced by glucose withdrawal, calcium ionophore, or serum withdrawal. The **p35** protein, which is required to block virus-induced **apoptosis** of cultured insect **cells**, is only the second gene product shown to block mammalian neural **cell** death, with Bcl-2 being the first. Because there is no apparent homology between **p35** and Bcl-2, the existence of a **cellular** death program that may be modulated at multiple points is suggested. Furthermore, these findings demonstrate that the putative **cellular** death program is conserved across species and **cell** types.

DESCRIPTORS:
MAJOR CONCEPTS: **Cell** Biology; Genetics; Microbiology; Nervous System (Neural Coordination); Pathology
BIOSYSTEMATIC NAMES: Baculoviridae--Viruses; Muridae--Rodentia, Mammalia, Vertebrata, Chordata, Animalia
ORGANISMS: rat (Muridae); Autographa californica nuclear polyhedrosis

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Display 5/9/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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virus (Baculoviridae)
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; chordates; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; rodents; vertebrates; viruses
MISCELLANEOUS TERMS: **APOPTOSIS**
CONCEPT CODES:
02506 Cytology and Cytochemistry-Animal
12510 Pathology, General and Miscellaneous-Necrosis (1971-)
20504 Nervous System-Physiology and Biochemistry
31500 Genetics of Bacteria and Viruses
33506 Virology-Animal Host Viruses
BIOSYSTEMATIC CODES:
02603 Baculoviridae (1993-)
86375 Muridae

- end of record -

?

Display 5/9/8 (Item 1 from file: 154)
DIALOG(R)File 154:MEDLINE(R)
(c) format only 2000 Dialog Corporation. All rts. reserv.

10316861 20115142
Part I. Bcl-2 and Bcl-x(L) limit **apoptosis** upon infection with alphavirus vectors.
Mastrangelo AJ; Hardwick JM; Bex F; Betenbaugh MJ
Department of Chemical Engineering, The Johns Hopkins University, 3400 North Charles Street, Baltimore, Maryland 21218, USA.
Biotechnology and bioengineering (UNITED STATES) Mar 5 2000, 67 (5) p544-54, ISSN 0006-3592 Journal Code: A6N
Languages: ENGLISH
Document type: JOURNAL ARTICLE
JOURNAL ANNOUNCEMENT: 0005
Subfile: INDEX MEDICUS

Viral expression systems offer the ability to generate high levels of a particular protein within a relatively short period of time. In particular, alphavirus constructs based on Sindbis virus (SV) and Semliki Forest virus (SFV) are promising vehicles as they are cytoplasmic vectors with the

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Display 5/9/8 (Item 1 from file: 154)
DIALOG(R)File 154:MEDLINE(R)
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potential for high expression levels. Two such alphavirus vectors were utilized during the current study to infect two commercially relevant **cell** lines, baby hamster kidney (BHK) and Chinese hamster ovary (CHO); the first was a fully competent SV derivative carrying the gene for chloramphenicol acetyltransferase (dsSV-CAT), while the second was a replication deficient SFV construct containing the human interleukin-12 (IL-12) **p35** and p40 genes (SFV-IL-12). Since infection with these vectors induced **apoptosis** in both **cell** lines, the present effort was dedicated to determining the ability of anti-**apoptosis** genes to limit the **cell** death associated with these virus constructs. Infection with the dsSV-CAT vector resulted in the rapid death of BHK and CHO **cells** within 4 days, a phenomenon which was considerably delayed by **stably** overexpressing bcl-2 or bcl-x(L). In fact, **cellular** lifespans were doubled in both BHK-bcl2 and CHO-bclx(L) **cells** relative to the parental **cell** lines. Furthermore, the presence of these gene products provided increases of up to 2-fold in recombinant CAT production. Overexpression of bcl-2 and

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Display 5/9/8 (Item 1 from file: 154)
DIALOG(R)File 154:MEDLINE(R)
(c) format only 2000 Dialog Corporation. All rts. reserv.
bcl-x(L) also altered the response of these **cells** upon infection with SFV-IL-12. While the parental **cell** lines were completely nonviable within 1 week, the BHK-bcl2, BHK-bclx(L), and CHO-bclx(L) **cells** each recovered from the infection, resuming exponential growth and regaining viabilities of over 90% by 9 days post-infection. Total IL-12 productivities were nearly doubled by Bcl-2 and Bcl-x(L) in the CHO **cells**, although this effect was apparently **cell**-line specific, as the native BHK **cells** were able to secrete more IL-12 than either of its **transfected** derivatives. Regardless, the presence of the anti-**apoptosis** genes allowed the production of IL-12 to be maintained, albeit at low levels, from each of the **cell** lines for the duration of the culture process. Therefore, overexpression of bcl-2 family members can have a significant impact on culture viabilities and recombinant protein production during alphavirus infections of mammalian **cells**. Copyright 2000 John Wiley & Sons, Inc.
Tags: Animal; Human; Support, U.S. Gov't, Non-P.H.S.
Descriptors: **Apoptosis**--Genetics--GE; *Gene **Transfer**; *Genes,

-more-

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Display 5/9/8 (Item 1 from file: 154)
DIALOG(R)File 154:MEDLINE(R)
(c) format only 2000 Dialog Corporation. All rts. reserv.
bcl-2; *Genetic Vectors; *Proto-Oncogene Proteins c-bcl-2--Genetics--GE; Alphavirus; CHO **Cells**; Gene Expression Regulation; Hamsters
CAS Registry No.: 0 (bcl-x protein); 0 (Genetic Vectors); 0 (Proto-Oncogene Proteins c-bcl-2)

- end of record -

?

Display 5/9/9 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

06023567 Genuine Article#: XQ112 Number of References: 25
Title: **Stable transformation** of insect **cells** to coexpress a rapidly selectable marker gene and an inhibitor of **apoptosis**
Author(s): McLachlin JR; Miller LK (REPRINT)
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Abstract: We have constructed several plasmid expression vectors to express foreign genes in **stably transformed** insect **cells**. Unlike baculovirus-based expression vectors by which genes of interest are expressed transiently before lysis of virus virus-infected **cells**, genes call be expressed continuously over many passages in a **stable cell** line. Furthermore, the function of a gene or genes expressed in a **stable cell** line from an insect-specific promoter that is constitutively expressed can be studied in the absence of virus infection and viral gene expression. In this study, we have expressed a novel, selectable marker gene, puromycin acetyltransferase, under the control of the Drosophila melanogaster hsp70 promoter or under the control of the AcMNPV ie-1 promoter which is active in Spodoptera frugiperda **cells** in the absence of virus infection. In addition, we have constructed expression vectors which coexpress two genes from separate promoters, the pac gene which confers resistance to puromycin and a baculovirus gene which inhibits **apoptosis**, derived from Orygia pseudotsugata nuclear

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polyhedrosis virus. Both genes were expressed in **stable** populations of S. frugiperda **cells** in the absence of continuous drug selection.
Descriptors--Author Keywords: Spodoptera frugiperda **cells** ; puromycin acetyltransferase ; Drosophila hsp70 promoter ; dominant selectable marker ; **apoptosis**
Identifiers--KeyWord Plus(R): MAMMALIAN-**CELLS**; PUROMYCIN-RESISTANCE; BACULOVIRUS GENES; ENCODING GENE; EXPRESSION; PROMOTER; LINES; **P35**; ACETYLTRANSFERASE; SUPPRESSION
Research Fronts: 95-2868 002 (BACULOVIRUS-INFECTED INSECT **CELLS**; AUTOGRAPHA-CALIFORNICA NUCLEAR POLYHEDROSIS-VIRUS; EXPRESSION OF THE HUMAN INTERLEUKIN-2 RECEPTOR-GAMMA CHAIN)
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Suppression of **apoptosis** in insect **cells stably transfected** with baculovirus **p35**: Dominant interference by N-terminal sequences p35sup 1sup -sup 7sup 6
Cartier J.L.; Hershberger P.A.; Friesen P.D.
ADDRESS: P.D. Friesen, Institute for Molecular Virology, Bock Laboratories, University of Wisconsin, 1525 Linden Dr., Madison, WI 53706-1596, United States
Journal: Journal of Virology, 68/12 (7728-7737), 1994, United States
PUBLICATION DATE: 19940000
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LANGUAGES: English SUMMARY LANGUAGES: English

Expression of **p35** from the DNA genome of Autographa californica

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nuclear polyhedrosis virus (AcMNPV) suppresses virus-induced **apoptosis** and promotes virus replication in Spodoptera frugiperda (SF21) **cells**. To examine the molecular mechanism by which **p35** prevents **apoptosis** in insects, SF21 **cells** were **stably transfected** with **p35**. Neomycin-resistant **cell** lines that synthesized protein **P35** were identified. **Stable transfection** with **p35** protected SF21 **cells** from **apoptosis** induced by actinomycin D concentrations that caused apoptotic death of untransfected **cells**. **Cellular** expression of **p35** also blocked **apoptosis** induced by infection with **p35** null mutants and restored mutant replication to levels comparable to those of wild-type virus. In contrast, **stable** expression of the mammalian death suppressor bcl-2 failed to block actinomycin D- or AcMNPV-induced **apoptosis**. Thus, **p35** was sufficient to prevent **apoptosis**, whereas bcl-2 was not, suggesting that the activities of the two nonhomologous death regulators are functionally distinct. **Stable** expression of the truncation mutant p35sup 1sup -sup 7sup 6, containing the

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N terminus of **p35**, failed to block **apoptosis**. However, p35sup 1sup -sup 7sup 6 interfered with **p35** antiapoptotic activity, since **stably transfected cells** underwent **apoptosis** upon infection with wild-type AcMNPV. Despite normal levels of viral **p35** transcription, **P35** levels were selectively reduced during infection. Thus, p35sup 1sup -sup 7sup 6 acted as a dominant inhibitor by directly or indirectly affecting the synthesis or stability of viral **P35**. These results suggested that the N terminus of **P35** constitutes a functional domain which is required to interact with other proteins, possibly host invertebrate death regulators or **P35** itself.

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